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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,216	10/01/2003	Kay Leong Lim	AMT00-002CIP	9687
7590	03/14/2006		EXAMINER	
George O. Saile 28 Davis Avenue Poughkeepsie, NY 12603			JENKINS, DANIEL J	
			ART UNIT	PAPER NUMBER
			1742	

DATE MAILED: 03/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/676,216	LIM ET AL.	
	Examiner	Art Unit	
	Daniel J. Jenkins	1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-5 and 10-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-5 and 10-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>10/19/05</u> | 6) <input type="checkbox"/> Other: _____ |

1. The Examiner has carefully considered Applicant's Response of 12/20/05. The Examiner does not find Applicant's argument against the double-patenting rejection persuasive. In particular, the Examiner finds that the claimed subject matter in light of the entire disclosure anticipates Applicant's pending claims. The Examiner notes that not all pending claims must be met for a double-patenting rejection to be proper. At this time, the Examiner makes additional rejections, this Action accordingly not made final.

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 3-5 and 10-14 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-11 and 19-22 of U.S. Patent No. 6,461,563. Although the conflicting claims are not identical, they are not patentably distinct from each other because the pending claims are encompassed by the granted claims.

4. Claims 3-5 and 10-14 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6 of U.S. Patent No. 6,660,225. Although the conflicting claims are not identical, they are not patentably distinct from each other because the pending claims are encompassed by the granted claims.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seyama et al. in view of Hiraoka et al.

Art Unit: 1742

Seyama et al. discloses the invention substantially as claimed. Seyama et al. discloses a method of forming a sintered article comprising:

- forming a first mixture comprising a first metal powder and a binder;
- forming a green body by compression molding said first mixture;
- forming a second mixture comprising a second metal powder and a binder; and
- providing said green body to a mold;
- injection molding said second mixture into said mold; and
- sintering said mixtures to form a sintered article.

The Examiner finds that any combination of different materials meet the limitation of claim 4.

However, Seyama et al. does not disclose wherein a lubricant is added to said mixtures, but only discloses addition of binder, plasticizer and solvent.

It is common knowledge in the prior art to add lubricant to formed sinterable mixtures in order to reduce die and injection molding equipment wear.

It would have been obvious to one having ordinary skill in the art at the time of the invention to add a lubricant to the mixtures of Seyama et al. in order to decrease forming equipment wear.

However, Seyama et al. does not disclose wherein the binder and material composition and amounts are selected so as to control shrinkage so that an outer component is added in joining to an inner component.

Hiraoka et al. teaches that when composite components are formed of separate sinterable mixtures, one of ordinary skill can select a greater amount of shrinkage of an outer component in order to assist in bonding.

Hiraoka et al. further teaches shrinkage amounts that closely approximate those as claimed by Applicant establishing a prima facie case of obviousness.

It would have been obvious to consider and select shrinkage amounts in the invention of Seyama et al. when the geometry forms a joined composite in order to increase the strength of the joined bond.

8. Claims 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bieberich in view of Seyama et al. and further in view of Hiraoka et al.

Bieberich discloses the invention substantially as claimed. Bieberich discloses a method of forming a wire die comprising :

providing a composite wire die structure formed of at least two sinterable mixtures; and

sintering said at least two sinterable mixtures to form a wire die.

However, Bieberich does not disclose the method as claimed, but provides for sinter bonding of mixtures.

Seyama et al. in view of Hiraoka et al. discloses a method of forming a sintered composite body of the claimed method in the same field of endeavor, powder metallurgy, for the purpose of increasing the bond between the separate mixtures of the composite.

It would have been obvious to one having ordinary skill in the art to use the method of Seyama et al. in view of Hiraoka et al. in the invention of Bieberich in order to form a wire die of improved composite strength.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Jenkins whose telephone number is 571-272-1242. The examiner can normally be reached on M-TH6:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1242. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Daniel J. Jenkins
Primary Examiner
Art Unit 1742

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